

Surveillance and Broadcast Services

Integrated Communications Navigation and Surveillance (ICNS) Conference

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Federal Aviation
Administration



Agenda

- **Transition to NextGen**
- **Program Background**
- **Dual Track Strategy**
- **Applications**
- **Separation Standards**
- **Acquisition Status**
- **Rulemaking**
- **Risks**
- **Key Milestones**
- **Next Steps**



Realizing NextGen

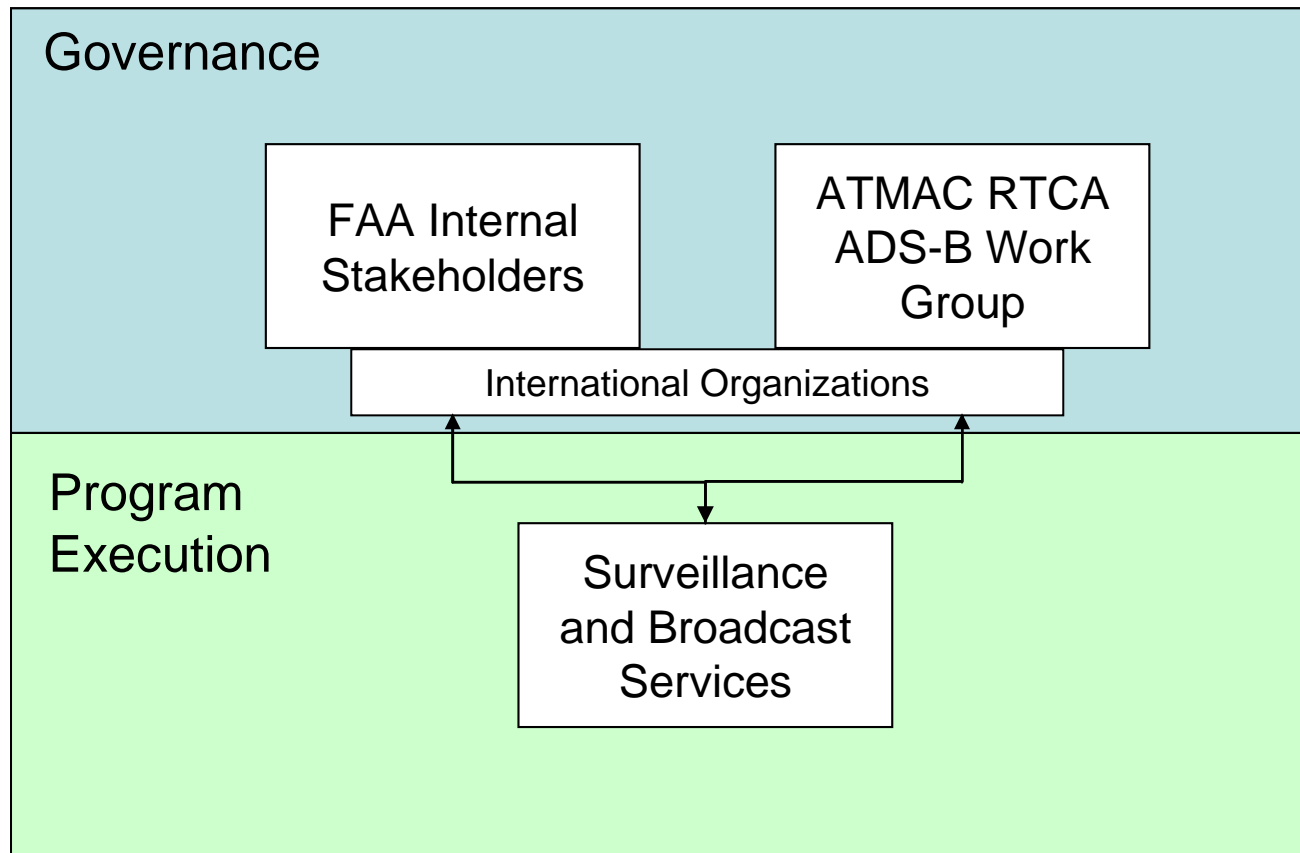


Background: Objective

- **Develop a multi-segment, life cycle managed, performance based ADS-B strategy that aligns with the Next Generation Air Transportation System (NGATS) vision and generates value for the National Airspace System (NAS)**
 - Integrate Concept of Operations for Portfolio of ADS-B Applications
 - Develop Application Life Cycle Management Approach
 - Establish Infrastructure
 - Continuously Monitor Value and Adjust Investments



Background: Program Governance



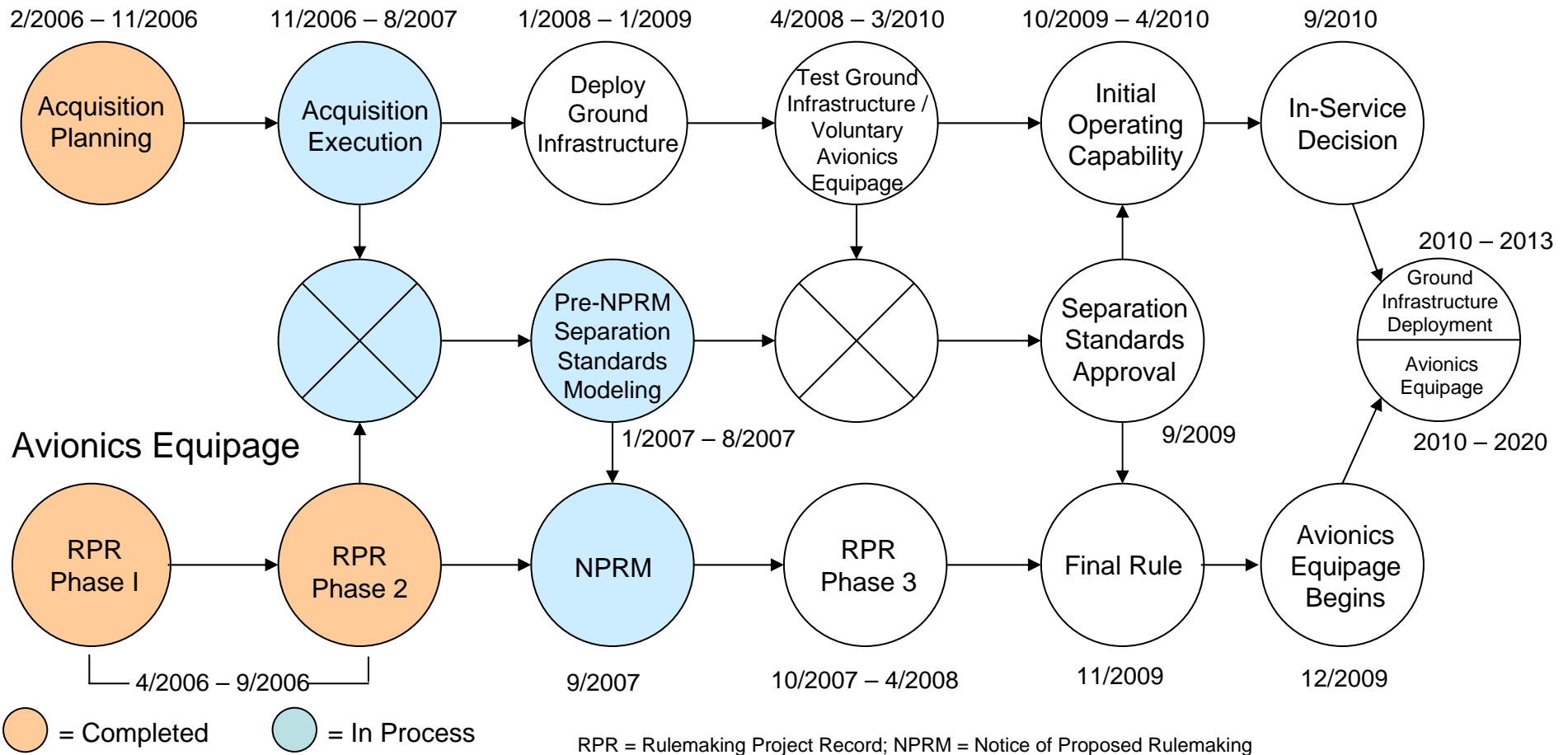
Background: International Harmonization

- **International Civil Aviation Organization (ICAO)**
 - Aeronautical Surveillance Panel (ASP)
 - Separation and Airspace Safety Panel (SASP)
 - Caribbean and South American Regional Planning and Implementation Group (GREPECAS)
 - Asia Pacific Air Navigation Planning and Implementation Regional Group (APINPIRG)
- **Eurocontrol**
 - Action Plan 23
 - Airborne Separation Assistance System Thematic Network 2 (ASAS –TN 2)
- **Requirements Focus Group (RFG)**
 - Joint RTCA / EUROCAE Working Group
- **Recurring Coordination Meetings**
 - Transport Canada
 - NAV CANADA
 - Civil Aviation Safety Authority
 - Airservices Australia
 - Eurocontrol



Dual Track Strategy

Ground Infrastructure

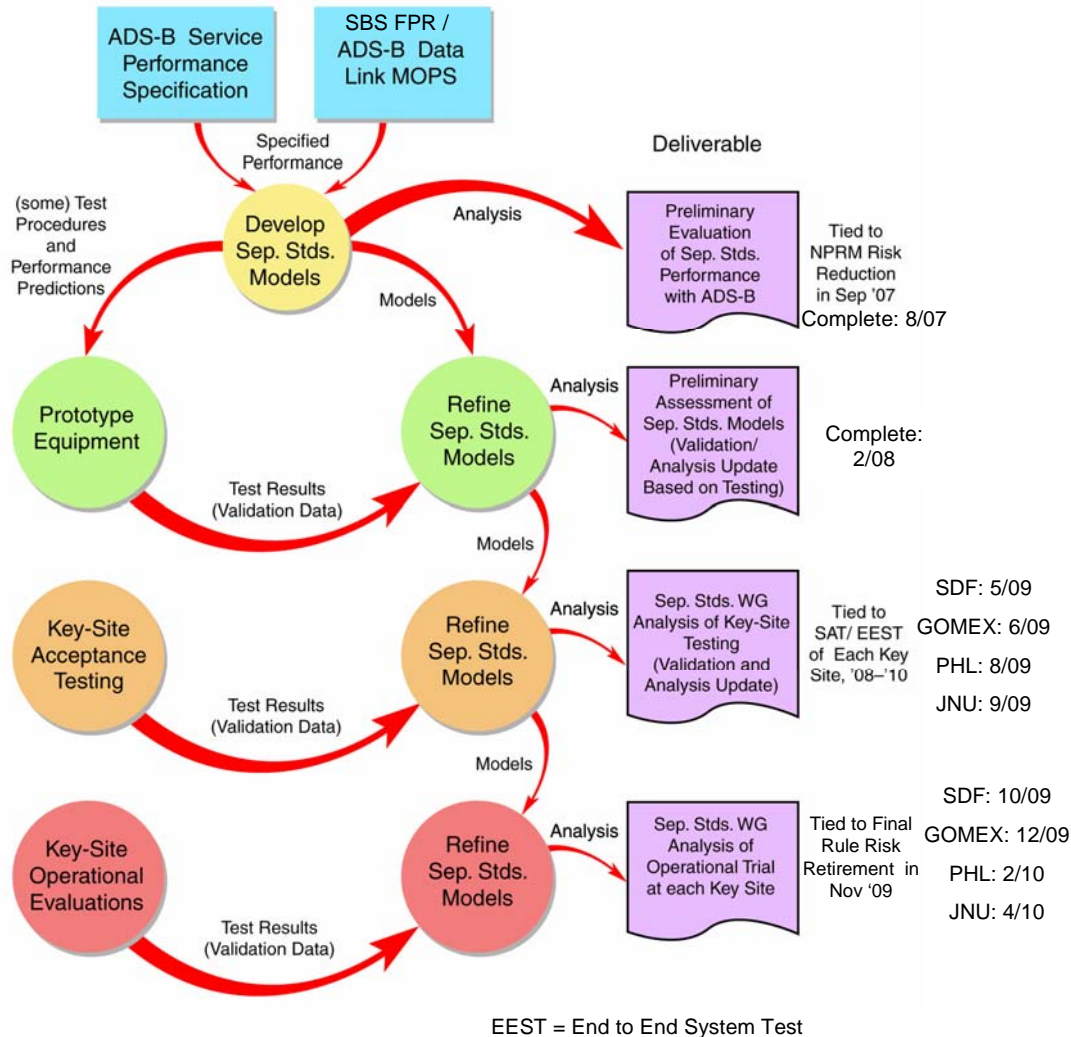


Initial ADS-B Services and Applications

| Services / Applications: |
|--|
| Surveillance Broadcast Services (En Route, Terminal, Surface) |
| Traffic / Flight Information Broadcast Services |
| Enhanced Visual Acquisition |
| Enhanced Visual Approaches (1) |
| Final Approach and Runway Occupancy Awareness |
| Airport Surface Situational Awareness |
| Conflict Detection |

(1) Merging and Spacing and Cockpit Display of Traffic Information (CDTI) Assisted Visual Separation (CAVS) are a part of the Enhanced Visual Approaches Application

Separation Standards Planning for SBS



Key Elements

- **Modeling/Simulation:** Model various systems and subsystems for SBS. Run simulations on models to determine viability of a separation standard.
- **Prototyping:** Prototype components of system to validate and update models.
- **Testing:** Test actual system to determine compliance with Sep. Standard
- **Operational Evaluation:** Evaluate data in an operational setting to ensure performance supports a standard

Acquisition Status

- **A Screening Information Request (SIR) was released on November 30, 2006**
- **The purpose of this SIR was to identify offerors who are most likely to receive an ADS-B contract award**
- **SIR responses received on January 24, 2007**
 - The following prime vendors submitted proposals
 - Raytheon
 - Lockheed Martin
 - ITT
- **A down-select decision was announced on February 23, 2007**
- **The Request for Offer (RFO) was released on March 30, 2007**
 - The RFO is focused on evaluating implementation of Broadcast Services into the NAS and how the services are proposed to be rolled out
- **Responses are due to the FAA on June 4, 2007**



Rulemaking Status

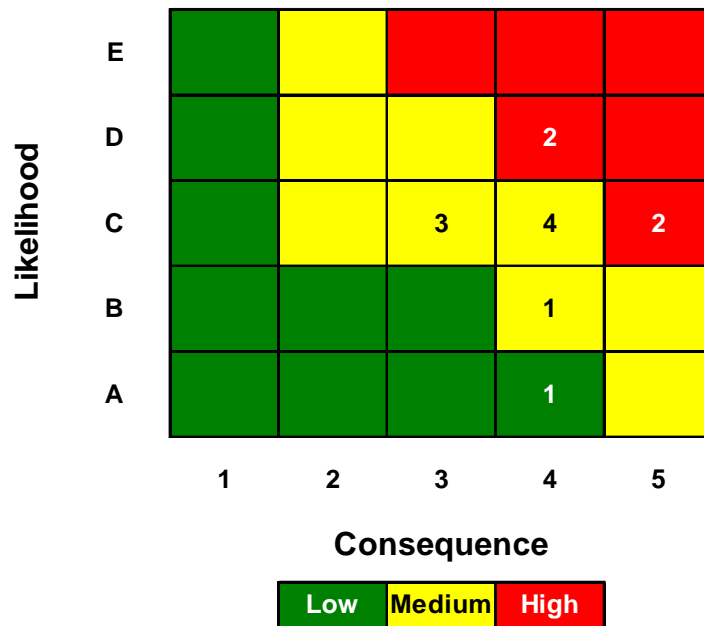
| Task: | Planned Date: | New Date / Status: |
|---|------------------------------|------------------------------|
| Preliminary Team Concurrence of NPRM | 12/5/2006 | Complete |
| Economic Evaluation of NPRM | 2/12/2007 | Complete |
| Final Team Concurrence (through Director level) of NPRM | 2/20/2007 | 5/4/07 |
| Associate Level Concurrence of NPRM | 3/1/2007 | 5/11/07 |
| AGC-1 Approval of NPRM | 3/15/2007 | 5/11/07 |
| ADA/AOA Approval of NPRM | 3/30/2007 | 5/30/2007 |
| OST Approval of NPRM (given standard 30 days as indicated in the rulemaking manual) | 4/30/2007 | 6/29/2007 |
| OMB Approval of NPRM (given standard 90 days as directed by Executive Order) | 8/1/2007 | 9/28/2007 |
| Issuance | No later than September 2007 | No later than September 2007 |



Program Status: Risks (as of 4/12/07)

13 Total Rated Risks: 4 High, 8 Medium,
1 Low

Risk Summary



High Risks

Risk #1: If NAS users demonstrate active opposition to avionics related airspace mandates, there may be delays in required rulemaking activities and/or the program may experience a reduction in benefits. (5C)

Risk #7: Without proper control of the 1090 MHz spectrum, the addition of SBS to the current environment may reduce the performance of ADS-B and other 1090 MHz systems, reducing benefits and system performance. (4D)

Risk #23: If ADS-B separation standards are not approved for currently equivalent separation standards, then the performance benefits of ADS-B may not be realized. (4D)

Risk #46: If FAA does not change flight plan format to accept multiple equipment codes, automation will not be able to distinguish between ADS-B equipped and non-equipped aircraft, and program ISD may be delayed. (5C)

Source: SBS
Risk Database

Key Upcoming Milestones

- **Separation Standards Risk reduced from high to medium: Planned August 2007**
- **Final JRC to Rebaseline Segments 1 and 2: Planned August 2007**
- **Contract Award: Planned August 2007**
- **NPRM published on Federal Register: Planned September 2007**



Next Steps

- **Operational Implementation**
 - Performance Based System
 - Avionics
 - Ground infrastructure
 - Pilot / Controller
 - Policy
 - Airport Improvement Program
 - Preferred routes
 - Separation Standards Development
 - Demonstrate current separations standards and better

Success through program governance focused on a collaborative FAA / industry / international relationship

